AMENDMENTS TO THE CLAIMS

Claims 1-19. (Canceled)

20. (Original) A method of forming a transistor comprising:

forming a first source/drain layer over a surface of a semiconductor substrate;

forming a relaxed silicon germanium layer over said first source/drain layer;

forming a second source/drain layer over said relaxed silicon germanium layer;

etching said first source/drain layer, said relaxed silicon germanium layer and said second source/drain layer to form at least one pillar extending outwardly from said surface of said semiconductor substrate;

forming a strained silicon layer on each sidewall of said at least one pillar;

forming an oxide layer over said strained silicon layer on one sidewall of said at least one pillar; and

forming a polysilicon layer on the sidewall opposite said one sidewall on which said oxide layer is formed.

21. (Original) The method of claim 20, wherein said relaxed silicon germanium layer is epitaxially grown by ultra high vacuum chemical vapor deposition.

22. (Original) The method of claim 20, wherein said relaxed silicon germanium layer is epitaxially grown by ultra high vacuum chemical vapor deposition using dichlorosilane and germane as precursors.

23. (Original) The method of claim 20, wherein the germanium content of said relaxed silicon germanium layer is further graded in steps.

24. (Original) The method of claim 23, wherein the germanium content of said relaxed silicon germanium layer is further graded in steps using a linear graded buffer technique.

25. (Original) The method of claim 24, wherein the germanium content of said relaxed silicon germanium layer is further graded in steps using a linear graded buffer technique by increasing the germanium content from 0 to about 20%.

26. (Original) The method of claim 20, wherein said relaxed silicon germanium layer is formed to a thickness of about 2,000 Angstroms to about 40,000 Angstroms.

27. (Original) The method of claim 20, wherein said strained silicon layer is epitaxially grown by ultra high vacuum chemical vapor deposition

28. (Original) The method of claim 20, wherein said strained silicon layer is formed to a thickness of about 200 Angstroms to about 2,000 Angstroms.

29. (Original) The method of claim 20, wherein said strained silicon layer formed in contact with said relaxed silicon germanium layer forms a biaxial tensile strain.

30. (Original) The method of claim 20, wherein said biaxial tensile strain modifies the band structure of said strained silicon layer.

31. (Original) The method of claim 20, wherein said biaxial tensile strain enhances the carrier transport in said strained silicon layer.

32. (Original) A method of forming a transistor structure, said method comprising:

providing at least one silicon germanium vertical pillar extending outwardly from a surface of a semiconductor substrate, said silicon germanium vertical pillar comprising a first source/drain layer formed over said semiconductor substrate, a relaxed silicon germanium layer formed over said first source/drain layer and a second source/drain layer formed over said relaxed silicon germanium layer; and

forming a strained silicon layer in contact with said at least one silicon germanium vertical pillar.

33. (Original) The method of claim 32, wherein said relaxed silicon germanium layer is epitaxially grown by ultra high vacuum chemical vapor deposition.

34. (Original) The method of claim 33, wherein said relaxed silicon germanium layer is epitaxially grown by ultra high vacuum chemical vapor deposition using dichlorosilane and germane as precursors.

35. (Original) The method of claim 32, wherein the germanium content of said relaxed silicon germanium layer is graded using a linear graded buffer technique.

36. (Original) The method of claim 35, wherein the germanium content of said relaxed silicon germanium layer is graded using a linear graded buffer technique to increase the germanium content from 0 to about 20%.

37. (Original) The method of claim 32, wherein said strained silicon layer is epitaxially grown by ultra high vacuum chemical vapor deposition